



**180 Kehoe Blvd.
Carol Stream, Illinois 60188 USA
1-877-392-7854 (Tech Service).**

CCC-20 TRAINING



CCC-20

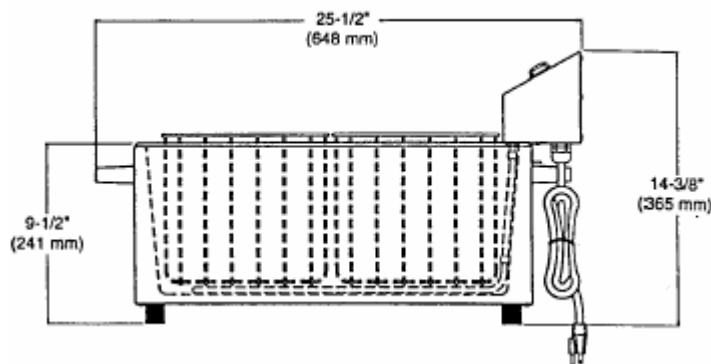
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WARRANTY

Equipment manufactured by Roundup Food Equipment Division of A. J. Antunes & Co. has been constructed of the finest materials available and manufactured to high quality standards. These units are warranted to be free from mechanical and electrical defects for a period of one year from date of purchase under normal use and service, and when installed in accordance with manufacturers recommendations. To insure continued proper operation of the units, follow the maintenance procedure outlined in the Owner Manual.

1. This warranty does not cover cost of installation, defects caused by improper storage or handling prior to placing of the Equipment. This warranty does not include overtime charges or work done by unauthorized service agencies or personnel. This warranty does not cover normal maintenance, calibration, or regular adjustments as specified in operating instructions, or manuals (see Owner's Manual of specific product); and / or labor involved in moving adjacent objects to gain access to the Equipment. This warranty does not cover consumable items such as grill covers, gaskets, O-rings and bulbs. This warranty does not pay travel mileage, or any other charges for a service to reach the equipments location (unless stated in the Owners Manual).
2. Roundup reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment because of factors beyond our control and government regulations. Charges to update equipment do not constitute a warranty charge.
3. If shipment is damaged in transit the purchaser should make his claim directly upon the carrier. Careful inspection should be made of the shipment as soon as it arrives and visible damage should be noted upon the carrier receipt. Damage should be reported to the carrier. This damage is not covered under this warranty.
4. Warranty charges do not include freight or foreign, excise, municipal or other sales or use taxes. All such freight and taxes are the responsibility of the purchaser.
- 5. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL ROUNDUP BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.**

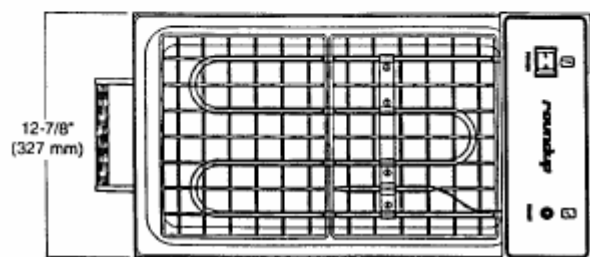
SPECIFICATIONS



ELECTRICAL: 1750 Watts, 15 Amps,
120 VAC, 60 Hz,
6 ft. (183 cm) power cord and
NEMA 5-15P plug.

(220-240 Volt) 1750-2090 Watts,
8.0-8.7 Amps,
220-240 VAC, 50/60 Hz,
6 ft. (183 cm) power cord and
CEE 7/7 plug.

COOKING TIME: 35 to 45 minutes @ 160°F (71°C)



▲ ELECTRICAL SHOCK HAZARD ▲

- Electrical ground is required on this appliance.
- Do Not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.
- Do Not have a fuse in the neutral or grounding circuit. A fuse in the neutral or grounding circuit could result in an electrical shock.
- Do Not use an extension cord with this appliance.
- Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

Failure to follow these instructions could result in serious injury or death

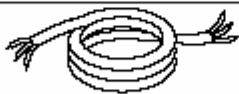

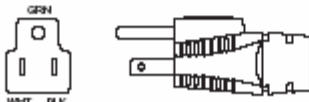
The CCC-20 Corn Cooker is completely wired and ready to plug. When locating the Corn Cooker, make sure that the Head Housing Assembly is to the rear (away from front of counter) of Base Housing Assembly. This is necessary to insure proper operation of heater and to allow adequate room for loading and unloading of baskets.

SPECIFICATIONS

Electrical Ratings

Model & Mfg. No.	Voltage	Watts	Amps	Hertz
CCC-20 9600200	120	1750	15.0	50/60
CCC-20 9600202	208 - 240	1560 - 2090	7.5 - 8.6	50/60
CCC-20 9600214	208 - 240	1560 - 2090	7.5 - 8.6	50/60
CCC-20 9600215 (Mfg. China)	208 - 240	1560 - 2090	7.5 - 8.6	50/60
CCC-20 9600217 (Mfg. China)	120	1750	15.0	50/60

Electrical Cord & Plug Configurations

Letter Code*	Description	Configuration
C	Commercial Cord	
H	Harmonized Cord	
(H)C**	CEE 7/7, 16 Amp., 250 VAC (Assembly Only).	
(C)F***	5-15P, 15 Amp., 120 VAC., Non - Locking (Assembly Only).	

** Indicates that the plug comes with a Harmonized Cord

*** Indicates that the plug comes with a Commercial Cord

▲ WARNING ▲

ELECTRICAL SHOCK HAZARD. FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

- Electrical ground is required on this appliance.
- Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.
- Do not use an extension cord with this appliance.
- Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

▲ CAUTION ▲

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

Capacity

Quantity-eighty 3" ears of corn

Shipping Weight

30 lbs. (13.6 kilos)

▲ WARNINGS ▲

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.

WARNING

GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

WARNING

ELECTRICAL WARNING. Indicates information relating to possible shock hazard. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

CAUTION

GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment.

WARNING

HOT SURFACE WARNING. Indicates information important to the handling of equipment and parts. Failure to observe caution could result in personal injury.

▲ WARNINGS ▲

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

Read all instructions before using equipment.

For your safety, the equipment is furnished with a properly grounded cord connector.

Do not attempt to defeat the grounded connector.

Install or locate the equipment only for its intended use as described in this manual.

Do not use corrosive chemicals in this equipment.

Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.

This equipment should be serviced by qualified personnel only. Contact the nearest Roundup authorized service facility for adjustment or repair.

Do not block or cover any openings on the unit.

Do not immerse cord or plug in water.

Keep cord away from heated surfaces.

Do not allow cord to hang over edge of table or counter.

The following warnings and cautions appear throughout this manual and should be carefully observed.

Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.

The unit should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

▲ WARNINGS ▲

WARNING ELECTRICAL SHOCK HAZARD. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

Electrical ground is required on this appliance. Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.

Do not use an extension cord with this appliance. Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

This equipment is to be installed to comply with the local plumbing codes and any other applicable codes.

Do not clean this appliance with a water jet.

Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.

Chlorides or phosphates in cleansing agents (bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or cracks. This damage is permanent and not covered by warranty.

The following tips are recommended for maintenance of your stainless steel equipment

Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.

Routine cleaning should be done daily using soap, ammonia detergent and water.

Stains and spots should be sponged using a vinegar solution as required.

Finger marks and smears should be rubbed off using soap and water.

Hard water spots should be sponged using a vinegar solution.

INSTALLATION

Unpacking

1. Remove unit and all packing materials from shipping carton.
2. Open the large box. Remove all packing materials and protective coverings from the unit and parts.
3. Wash baskets in soap and water. Wipe all surfaces of the unit with a hot damp cloth.

NOTE: Do not use a dripping wet cloth. Wring out before use.

4. Install baskets into unit.

NOTE: If any parts are missing or damaged, contact Antunes Technical Service **IMMEDIATELY** at 1-877-392-7854.

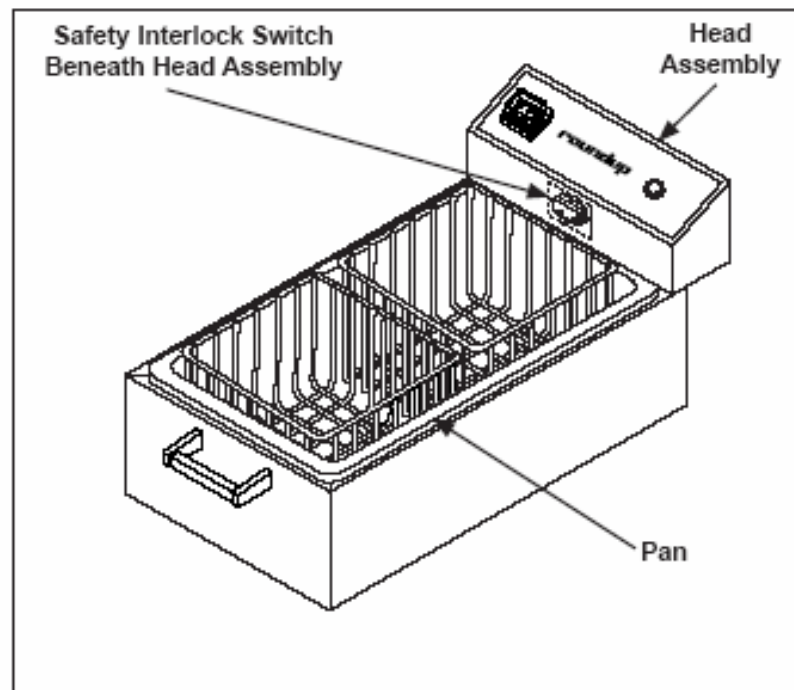


Figure 1. Corn Cooker

INSTALLATION

Equipment Setup

When placing the unit into service, pay attention to the following guidelines.

- Make sure the controls are positioned at the rear to ensure adequate room for loading and unloading baskets.
- Make sure power to the unit is off and the unit is at room temperature.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.
- Connect the unit to the power supply. Refer to the specification plate for the proper voltage.

CAUTION

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

WARNING

ELECTRICAL SHOCK HAZARD. FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

- Electrical ground is required on this appliance.
- Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.
- Do not use an extension cord with this appliance.
- The unit should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.
- Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

OPERATION

Operating Instructions

1. Fill the Pan about half full of hot tap water.
2. Turn the Rocker Switch (power On/Off) ON.

NOTE: If the light on the Rocker Switch does not light up, you must remove and reinstall the Head Assembly onto the pan (Figure 1) to ensure that the Safety Interlock Switch is properly engaged. If the Safety Interlock Switch is not engaged, the Rocker Switch light will not turn on, therefore, the unit will not heat.

3. Load each basket with a full or partial load of corn and immerse the baskets in the pan. Water should completely cover corn. Add more hot water if required.
4. Allow corn to cook approximately 35-45 minutes. The corn is ready to serve when the cob core temperature reaches 150°F (68°C).

NOTE: All models except Mfg. No. 9600214 are equipped with a green READY indicator (Figure 2) that lights when water operating temperature is reached.

Mfg. No. 9600214 is equipped with a Heater indicator that lights when heating element is on & turn off when the Heating Element is off..

5. Use the front basket as the serving basket, and the rear basket as the holding basket. Serve corn from the front basket until it is empty, then rotate the corn from the rear to the front basket. This method helps to keep track of which corn has been cooking the longest.

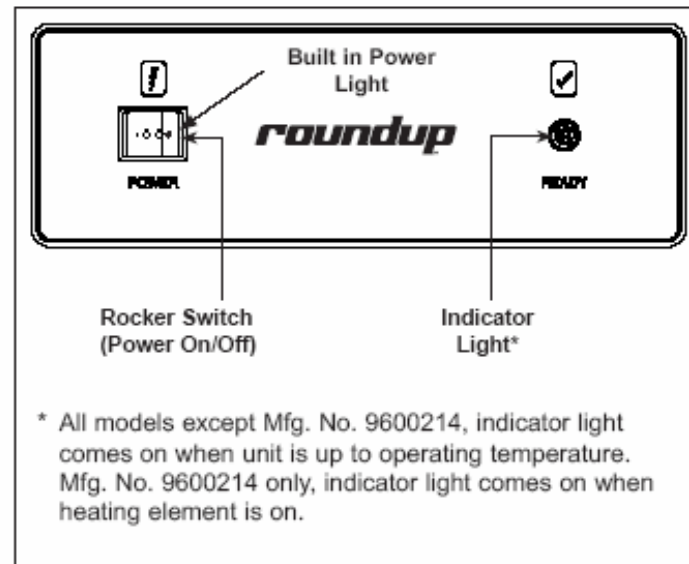


Figure 2. Controls

Unsold Corn

Carefully plan and schedule the loading of corn so that only a small amount is left at the end of the day. Any leftover corn can be prepared for use the next day by performing the following steps:

1. Remove corn from the cooker and place in a container. Handle the corn carefully to prevent damage to the kernels.
2. Cover corn with shaved ice or ice cubes and place in freezer.
3. Reheat the corn the same way as heating uncooked corn.

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TECHNICAL THEORY OF OPERATION

When the unit is plugged into the outlet, line voltage flows to the normally open **(N.O.)** safety interlock switch*. Once its contacts close, line voltage then flows to the input side of the power switch. When the power switch is turned on, line voltage then flows to a normally closed **(N.C)** capillary bulb style thermostat**. Providing the water temperature within the pan is below 162° F (72° C), the thermostat** calls for heat by supplying line voltage to the heating element***. As the water begins to heat up, the thermostat's bulb monitors the water temperature. When the water temperature approaches approximately 162° F (72° C), the thermostat's contacts open up & turn off the heating element***. Simultaneously, the "Green" indicator light**** will light up to indicate the water is up to temperature. The heating circuit will cycle on & off as needed, even at idle. If the heating circuit continues to call for heat, the water will begin to boil & overcook the corn.

NOTE: If this condition should arise, the root cause must be determined & corrected.

* Safety Interlock Switch: Used to prevent operation of the heating element in the event the head assembly is not properly seated onto the pan, or is being operated without the pan. The switch has an actuating plunger which protrudes from beneath the head assembly. Provided the head assembly is properly seated onto the pan, the weight of the head assembly allows the plunger to become depressed, therefore closing its contacts.

** Thermostat: The thermostat is fixed to maintain approximately 162° F (72° C) water temperature.

*** Heating Element: The element must only be operated while submersed in water.

**** CCC-20 (Mfg # 9600214) uses an "Amber" colored indicator light. It lights up when the heating element is on. It turns off when the heating element is off. When off, it indicates the water is up to temperature.

CCC-20 Component Description & Function

Head Assembly: It is the main assembly which consists of the following electrical components: heating element, power cord, power switch, thermostat, safety interlock switch, terminal block, & indicator light.

NOTE: The heating element will not operate if the head assembly is not properly seated onto the pan, or is being operated without the pan.

Power Switch: Double Pole Single Throw, turns the voltage On or Off to the unit's internal components.

NOTE: The built in led illuminates when line voltage is present into & out of the switch. If not lit, it normally indicates that the safety interlock switch is not be depressed. The head assembly should be removed & reinstalled onto the pan.

Splash Guard: A clear PVC boot that fits over the face of the power switch. It is used to help prevent water/moisture from entering & damaging the power switch & electrical components within the electrical compartment.

NOTE: The PVC boot must always be used. Failure to do so may result in water/moisture damage to electrical components.

Safety Interlock Switch: A normally open (N.O.) momentary switch that is used to prevent operation of the heating element in the event the head assembly is not properly seated onto the pan, or is being operated without the pan. The switch has an actuating plunger which protrudes from beneath the head assembly. Provided the head assembly is properly seated onto the pan, the weight of the head assembly allows the plunger to become depressed, therefore closing its contacts.

Safety Interlock Switch O'ring: An o'ring that fits over the plunger of the switch. It helps prevent water/moisture from entering & damaging the safety interlock switch & electrical components within the electrical compartment.

NOTE: The o'ring must always be used. Failure to do so may result in water/moisture damage to electrical components.

Terminal Block: A three pole, six terminal junction block. It links the incoming power cord wires (L1, N, Ground) to the safety interlock switch, power switch, & chassis ground.

Heating Element: It is an "M" shape element that is attached to the head assembly & is positioned at the bottom of the pan. It heats the water until it is cycled off by the thermostat.

Component Description & Function

Thermostat: A normally closed (**N.C.**) capillary bulb style thermostat. The bulb monitors the water temperature. It will cycle the heating element on & off as needed to maintain water temperature at approximately 162° F (72° C).

Green Light: Used on all CCC-20's except CCC-20 with Mfg # 9600214. It is a line voltage indicator light that is located on the head assembly. It is wired in parallel to the thermostat. When lit, it indicates the thermostat contacts are open & the water temperature should be approximately 162° F (72° C). When not lit, it indicates the thermostat contacts are closed & calling for heat.

Amber Light: Used **ONLY** on the CCC-20 with Mfg # 9600214. It is a line voltage indicator light that is located on the head assembly. It is wired in parallel to the heating element. When lit, it indicates the thermostat contacts are closed & calling for heat. When not lit, it indicates the thermostat contacts are open & the water temperature should be approximately 162° F (72° C).

Pan: The main container that accommodates the water, corn baskets, & the head assembly.

Baskets: Wire rack type baskets that accommodate the corn.

WIRING DIAGRAM

•18 GA. AWM

2. FOR MFG #9600214 ONLY.



TOOLS REQUIRED FOR REPAIR & TROUBLESHOOTING

- **(VOM) Volt Ohm Meter (digital or analog)**
- **Clamp type amp meter (digital or analog)**
- **Flat blade screwdriver 1/4 "**
- **Adjustable wrench 6"**
- **Nut driver set**
- **Channel locks**
- **Wire cutter, crimper, stripper**
- **Needle nose pliers.**
- **Temp meter with submersible probe**

MAINTENANCE

⚠ WARNING ⚠

Turn the unit off, disconnect the power source and allow the unit to cool down before performing any service or maintenance on the unit.

⚠ CAUTION ⚠

To prevent damage to the unit, do not use abrasive cleaners on the unit.

Cleaning Daily

1. Remove Baskets and the Head Assembly.
2. Empty the Pan of used water. Wash the Baskets and Pan in hot detergent water. Rinse in clear water and dry.
3. Wipe the Head Assembly with a damp cloth, then dry with a clean, dry cloth.
4. Install the Head Assembly onto the pan. **Make sure the Safety Interlock Switch is engaged.**
5. Install the Baskets.

TROUBLESHOOTING



To avoid possible personal injury and/or damage to the unit, inspection, test and repair of electrical equipment should be performed by qualified service personnel. The unit should be unplugged when servicing, except when electrical tests are required. Use extreme care during electrical circuit tests. Live circuits will be exposed.

Problem	Possible Cause	Corrective Action
Rocker Switch (power On/Off) is ON, but the unit does not heat and the light on the Rocker Switch is OFF.	The power cord is not correctly plugged in.	Plug power Cord into appropriate outlet.
	Circuit Breaker tripped.	Reset the Circuit Breaker.
	Damaged Power Cord.	Replace Power Cord.
	Loose, burnt, or broken wires in circuit.	Tighten wires and replace if burned or charred.
	Inoperable Rocker Switch.	Replace Rocker Switch.
	Safety Interlock Switch not engaged.	Reposition the Head Assembly to engage the Safety Interlock Switch according to the operating instructions in this manual..
Unit overheats or overcooks (water boils).	Inoperable Thermostat.	Replace the Thermostat
	Water level is too low.	Add water so that the corn is completely covered.
Unit under cooks the corn.	Inoperable Thermostat.	Replace the Thermostat.
Rocker Switch (power On/Off) is ON, the unit does not heat, but the light on the Rocker Switch is ON.	Inoperable Heating Element	Replace the Heating Element.
	Inoperable Thermostat.	Replace the Thermostat.
	Loose, burnt, or broken wires in circuit.	Replace wires.

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Parts Testing & Replacement Procedures

TESTING HEAD ASSEMBLY

See Head Assembly under “Component Description & Function” before proceeding.

If any of the head assembly’s electrical components are malfunctioning, each component must be tested individually

TESTING POWER SWITCH

See Power Switch & Splash Guard under “Component Description & Function” before proceeding.

Disconnect wires to isolate switch.
Turn switch to the “On” position. Verify continuity across terminals 1 & 2, then 4 & 5.
Next, turn switch to the “Off” position.
Reading should now be infinity.
Replace if fails test.



Replacement Procedures

Remove service panel.
Disconnect power switch wires (Mark for reinstallation).
Squeeze locking tabs inward & push switch & splash guard away from unit.
Install new switch along with the splash guard.

NOTE: If splash guard is damaged or missing, it must be replaced.

Failure to do so may result in water/moisture damage to electrical components.

Reinstall wiring onto switch.

Test unit for proper operation

TESTING SPLASH GUARD

See Splash Guard under “Component Description & Function” before proceeding.

The splash guard is typically trouble free. If it is damaged or missing, **it must be replaced.**



Replacement Procedures

Remove service panel.

Disconnect power switch wires (Mark for reinstallation).

Squeeze locking tabs inward & push switch away from unit.

Reinstall switch & new splash guard. NOTE: If splash guard is damaged or missing, it must be replaced. Failure to do so may result in water/moisture damage to electrical components.

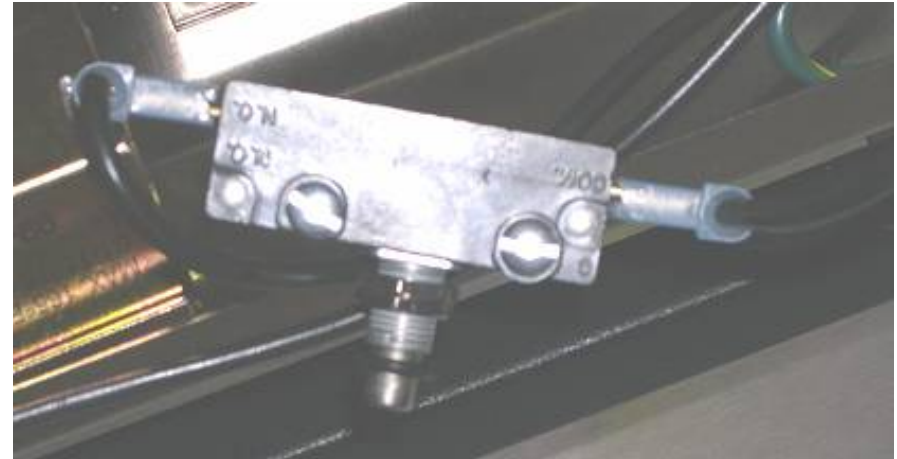
Reinstall wiring onto switch.

Test unit for proper operation.

TESTING SAFETY INTERLOCK SWITCH

See Safety Interlock Switch under “Component Description & Function” before proceeding.

Disconnect wires to isolate switch.
Verify continuity across the switch with the plunger manually depressed. Next, release plunger. Reading should now be infinity.
Replace if fails test.



Replacement Procedures

Remove service panel.

Disconnect switch wires.

Remove the two mounting screws.

Install new switch along with the new o’ring & secure with screws.

NOTE: The o’ring must always be used. Failure to do so may result in water/moisture damage to electrical components.

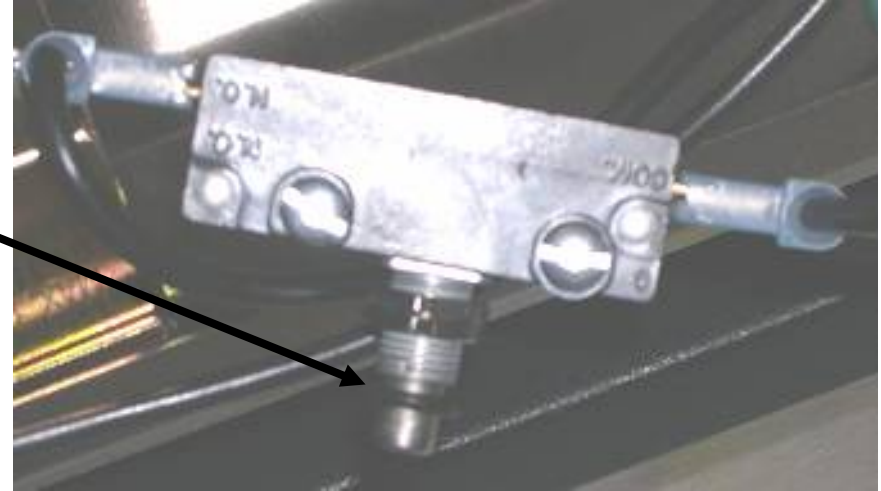
Reinstall wiring onto switch.

Test unit for proper operation.

TESTING SAFETY INTERLOCK SWITCH O'RING

See Safety Interlock Switch O'ring under "Component Description & Function" before proceeding.

The safety interlock switch o-ring is typically trouble free. If it is damaged, **it must be replaced.**



Replacement Procedures

Follow the "safety interlock switch replacement procedures".

NOTE: The o'ring must always be used.

Failure to do so may result in water/moisture damage to electrical components.

Test unit for proper operation.

TESTING TERMINAL BLOCK

See Terminal Block under “Component Description & Function” before proceeding.

Verify continuity across each of the three poles.
Replace if it fails test or if damaged.



Replacement Procedures

Remove service panel.

Remove the two mounting screws & nuts.

Disconnect terminal block wires (Mark for reinstallation).

Reinstall wires onto new terminal block & secure with screws & nuts.

Test unit for proper operation.

TESTING HEATING ELEMENT

See Heating Element under “Component Description & Function” before proceeding.



Replacement Procedures

Remove service panel.

Disconnect element wires.

Remove clamps & capillary bulb tubing from old element.

Remove the two element lock nuts & remove element.

Install new element & secure with lock nuts.

Reinstall the clamps & capillary tubing onto new element.

Reinstall element wires.

Test unit for proper operation.

TESTING THERMOSTAT

See Thermostat under “Component Description & Function” before proceeding.

To test thermostat for continuity:

Disconnect thermostat wires to isolate.

Verify continuity across terminals.

Replace if fails test.

To determine if an “over heating” condition is

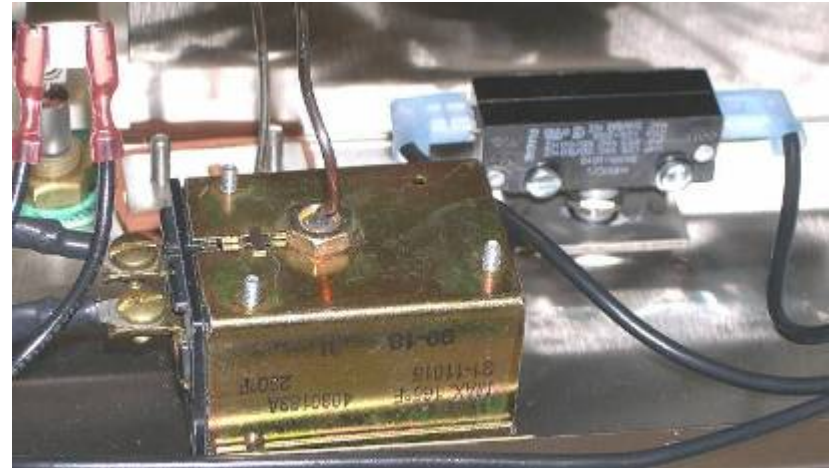
caused by a faulty thermostat: Fill the pan with hot water about 1” (2.5 cm) above the thermostat bulb. Turn unit on & monitor the water temperature for at least 30 minutes. Does the water temperature exceed 180 F (82 C)?

If yes, replace thermostat.

To determine if an “under heating” condition is

caused by a faulty thermostat: Fill the pan with hot water about 1” (2.5 cm) above the thermostat bulb. Turn unit on & monitor the water temperature for at least 30 minutes. Does the water temperature reach at least 150 F (65 C)?

If no, replace thermostat.



Replacement Procedures

Remove side service panel.

Remove thermostat mounting screws & acorn nuts.

Disconnect thermostat wires.

Reinstall wires onto new thermostat.

Install & secure new thermostat with screws & acorn nuts.

NOTE: Cautiously handle the bulb & capillary tubing. Failure to do so will result in premature thermostat failure.

Test unit for proper operation.

TESTING “GREEN” OR “AMBER” INDICATOR LIGHTS

See Green & Amber lights under “Component Description & Function” before proceeding.

Does the light turn on?

If no, is there line voltage present across the indicator light?

If yes, replace light.



Replacement Procedures

Remove service panel.

Disconnect the indicator light wires.

Push the light up & away from the unit.

Install new light into place until flush.

Reinstall wiring onto light.

Test unit for proper operation.

TESTING PAN

See Pan under “Component Description & Function” before proceeding.

The pan is typically trouble free. If it is damaged, it **must be replaced**.



Replacement Procedure

Remove the bottom panel.

Remove the pan's 4 hex nuts.

Remove pan.

Install new pan & secure with hex nuts.

Test unit for proper operation.



TESTING BASKETS

See Baskets under “Component Description & Function” before proceeding.

The baskets are typically trouble free. If they are damaged, **they must be replaced.**



Replacement Procedures

Remove baskets

Install new baskets